



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,574	01/21/2004	Nien-Hua Pai	17389.47	3462
22913 7590 07/09/2008 WORKMAN NYDEGGER 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111				
EXAMINER				
DAIBOUR, HENRY				
ART UNIT		PAPER NUMBER		
2625				
MAIL DATE		DELIVERY MODE		
07/09/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/761,574

**Applicant(s)**

PAI, NIEN-HUA

**Examiner**

HENRY DAHBOUR

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5,7-17 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,5 and 7-11 is/are allowed.
- 6) ☒ Claim(s) 12-17 and 21-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Telephone Interview***

1. The examiner acknowledges the telephone interview with Carl Reed on 04/10/2008. Applicant stated intent to cancel claims 18-20, and to rewrite claim 4 in independent form including all the limitations of the base claim and any intervening claims. Applicant also stated intent to amend claim 12, to include that rotation of the optical grid plate by the driving force changes an effective light-transmission area of the aperture.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 12-17 & 21-25 have been considered, but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai (U.S.6175405) in view of Uehara et al (U.S.4928172).

Regarding claims 12-13, Kawai discloses an exposure control device for adjusting an amount of light received by a focusing device and a photoelectric conversion device of an image scanning apparatus, comprising a control unit configured to generate a control signal according to a certain condition of the image scanning apparatus (see 34 in Figure 1) a driving unit controlled by the control unit configured to generate a driving force in response

to the control signal (see "positioning of the rotatable plate 21 through the motor 22" in lines 34-35 in column 7, also see 21 & 22 in Figure 1), an optical grid plate having an aperture (see 21 in Figures 1-2), wherein the driving unit comprises a motor and the optical grid plate is moved by rotation (see "positioning of the rotatable plate 21 through the motor 22" in lines 34-35 in column 7, also see 21 & 22 in Figure 1).

Kawai does not disclose that rotation of the optical grid plate by the driving force changes an effective light-transmission area of the aperture.

Uehara discloses these features (see rotating arrow in Figure 14, also see lines 37-66 in column 15).

Kawai and Uehara are analogous art because they are from the same field of endeavor, that is the art of imaging devices.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Uehara, with the device of Kawai.

The suggestion/motivation for doing so would have been because it would still have achieved the same purpose, of controlling the amount of light therethrough.

Therefore, it would have been obvious to combine Kawai with Uehara to obtain the invention specified in claim(s) 12-13.

5. Claims 12, 14-15, 21-23 are rejected under 35 U.S.C.103(a) as being unpatentable over Boyd et al (U.S.6621600) in view of Uehara et al (U.S.4928172).

Regarding claims 12, 14-15, Boyd discloses an exposure control device for adjusting an amount of light received by a focusing device and a photoelectric conversion device of an image scanning apparatus, comprising a control unit configured to generate

a control signal according to a certain condition of the image scanning apparatus (see "processor based controller" in line 45 in column 2, also see Figure 1), a driving unit controlled by the control unit configured to generate a driving force in response to the control signal (see "aperture size of the iris 106 is controllable by the controller" in lines 46-47 in column 2, also see 106 in Figure 1), an optical grid plate having an aperture (see 106 in Figure 1), wherein the certain condition of the image scanning apparatus is a selected resolution of the image scanning apparatus, and the effective light-transmissible area under high resolution is smaller than that under low resolution (see "high resolution scans use a relatively small aperture size....low resolution scans use a relatively large aperture size" in lines 2-4 in the abstract, also see "user could...select an aperture" in line 25 in column 3).

Boyd does not disclose that rotation of the optical grid plate by the driving force changes an effective light-transmission area of the aperture.

Uehara discloses these features (see rotating arrow in Figure 14, also see lines 37-66 in column 15).

Boyd and Uehara are analogous art because they are from the same field of endeavor, that is the art of imaging devices.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Uehara, with the device of Boyd.

The suggestion/motivation for doing so would have been because it would still have achieved the same purpose, of controlling the amount of light therethrough.

Therefore, it would have been obvious to combine Boyd with Uehara to obtain the invention specified in claim(s) 12, 14-15.

Regarding claim 21, see rejection of claim 12.

Regarding claim 22, wherein the optical grid plate is perpendicular to a light path when the control signal identifies a low resolution, and wherein the optical grid plate is slanted when the control signal identifies a high resolution (see "high resolution scans use a relatively small aperture size....low resolution scans use a relatively large aperture size" in lines 2-4 in the abstract of Boyd, also see "iris 82 transmits the maximum light quantity when it is oriented such that the axes of the tubular element 82a extend in parallel with the axis of the illuminating light, and the quantity of light transmitted therethrough is progressively decreased as the angle of inclination of the tubular elements 82a with respect to the optical axis of the illuminating light is increased" in lines 50-57 in column 15 of Uehara, also see 82 & 82a in Figure 14 of Uehara).

Regarding claim 23, see rejection of claim 14.

6. Claims 12, 16-17, 21, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al (U.S.6734903) in view of Uehara et al (U.S.4928172).

Regarding claims 12, 16-17, Takeda discloses an exposure control device for adjusting an amount of light received by a focusing device and a photoelectric conversion device of an image scanning apparatus, comprising a control unit configured to generate a control signal according to a certain condition of the image scanning apparatus (see 224 in Figure 5B, also see 207 & 207' in Figure 5A), a driving unit controlled by the control unit configured to generate a driving force in response to the control signal (see 202, 207, 207'

in Figure 5A), an optical grid plate having an aperture (see 202 in Figure 5A), wherein the certain condition of the image scanning apparatus is a predetermined comparing result of a voltage value of an output signal from the photoelectric conversion device with a threshold value, and the effective light-transmissible area is enlarged when the voltage value of the output signal is smaller than the threshold value (see "the light quantity.... is adjusted by the aperture stop 202...the output...signal from the CCD 203...compares this voltage value with the voltage of a reference voltage...thereby driving the aperture actuator 207" in lines 37, 38, 43, 44, 48 in column 12, also see Figures 5A-5B).

Takeda does not disclose that rotation of the optical grid plate by the driving force changes an effective light-transmission area of the aperture.

Uehara discloses these features (see rotating arrow in Figure 14, also see lines 37-66 in column 15).

Takeda and Uehara are analogous art because they are from the same field of endeavor, that is the art of imaging devices.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Uehara, with the device of Takeda.

The suggestion/motivation for doing so would have been because it would still have achieved the same purpose, of controlling the amount of light therethrough.

Therefore, it would have been obvious to combine Takeda with Uehara to obtain the invention specified in claim(s) 12, 16-17.

Regarding claim 21, see rejection of claim 12.

Regarding claims 24-25, see rejection of claims 16-17.

***Allowable Subject Matter***

7. Claims 1, 3, 5, 7-11 are allowed.

The following is an examiner's statement of reasons for allowance. The features identified, in combination with other claim limitations, are neither suggested nor discussed by the prior art of record.

Regarding claims 1, 3, 5, 7-11, the prior art, either singularly or in combination, does not teach or suggest an exposure control device comprising:

"...the light-transmission adjusting device comprising a driving unit controlled by the control unit to generate a driving force in response to the control signal, a first optical grid plate arranged in the light path, the first optical grid plate having a first light-transmission area, and a second optical grid plate having a second light-transmission area smaller than the first light-transmission area and optionally driven by the driving force to be aligned with the first optical grid plate so as to reduce the effective light transmission area".

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY DAHBOUR whose telephone number is (571)272-4295. The examiner can normally be reached on 9:00AM-5:30PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HD

/David K Moore/  
Supervisory Patent Examiner, Art Unit 2625